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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,306

03/30/2004

John Kanca

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22913

7590

08/24/2005

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EXAMINER

KILKENNY, PATRICK J

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,306

Applicant(s)

KANCA, JOHN

Examiner

Patrick J. Kilkeny

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 11/03/2004 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 9, 12, 13, 14, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Maissami (5791898). Maissami discloses a lens (Fig 1., #1) for use with a light-emitting device that has a hollow connector body that attaches (Columns 2, lines 51-53; Column 5, lines 2-3) to the light-emitting device to capture the light from the source (Fig., 1, #6). There is a tapered light guide (Fig. 1, # 3) that extends from the connector body with a substantially round shape at the end of the connector body (Fig. 1, # 5). There is also a focusing lens within the hollow lens in the form of a prism, which collects light through its curve surface and passes it through its tip (Fig. 1, # 2). With respect to claims 2 and 3, the specifics of the light-emitting device are not given patentable weight because the light-emitting device is not positively claimed.

Claim 1-4, 7, 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Hack (5,897,314). Hack discloses a lens for uses with a light-emitting device that has a connector body (Fig. 1, #23) that is attachable to a light emitting device, a cylindrical light guide extending from the connector body (Figs. 1 and 6, # 7), and a ball attached to the end of the light guide (Fig. 6, #7). Hack also discloses a ball with a diameter similar to the cylindrical light tube (Fig. 5, #44).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 5, 9, 7, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fischer (2003/0215766). Fischer discloses a lens with a connector body that couples to a light-emitting device that has a tapered light guide extending from the hollow (p. 5, paragraph 0073) connector body with a rounded shape at the end of the light guide (Figs.2A, #'s 242, 240, and 244). The lens is releasably attached to the light-emitting device via a snap-fit function (p. 5, paragraph 0076) and is shown in cylindrical shape in one embodiment (Fig. 4D). Fischer also discloses a focusing lens partially disposed in the hollow interior of the lens (Fig. 5A, #508). In another embodiment, the

focusing lens (Fig 5E, # 508a) has a curved surface which light enters (Fig. 5A, #510) and a light emitting tip from which light exits (Fig. 5A, #516).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maissami in view of Melikechi (2002/0187455). Maissami discloses the claimed invention with the exception of the integral configuration of the claimed lens and the light-emitting device. Mellikechi teaches a lens that is integrally attached to the light-emitting device (Fig. 4A, #54). Therefore, it would have been obvious to anyone with ordinary skill in the art at the time the invention was made to modify the lens device of Maissami to make in integrally attached, and therefore more secure to, the light-emitting device during dental restorative procedures.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hack. Hack discloses the claimed invention with the exception of the ball being between 1-6mm, and more specifically between 2-4mm. It would have been obvious to anyone with ordinary skill in the art at the time the invention was made to make the terminal ball end of the device within this range since it has been held that discovering

an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer in view of Hack. Fischer discloses the claimed invention, including a transparent lens material (p. 5, paragraph 0076), specifically silicone or polypropylene (p. 9, paragraph 0123) and a light-emitting device such as an LED for use with claimed lens and an integrally formed focusing lens and elongated light guide (Fig. 5E, 508a, 516, and 517). Fischer does not disclose a ball at the end of the light guide. Hack teaches a ball at the end of a light-emitting device for concentration of the emitted light (Fig. 6, #45). Therefore it would have been obvious to anyone with ordinary skill in the art at the time the invention was made to modify the invention of Fischer with a ball shaped terminal face of a light guide as taught by Hack in order to obtain a light emitting source with an emission face that can be efficiently used to cure and pack resins in the spaces of dental restoration procedures.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to claim 18 above, and further in view of Senn (6,482,004). Fischer in view of Hack discloses the claimed invention with the exception of the light-emitting device comprising a halogen bulb, and incandescent bulb, a fluorescent bulb, a plasma arc light, or a laser diode. Senn teaches a light-emitting dental curing device with employs a halogen lamp or a laser diode (Column 5, lines 40-44). Therefore, it would have been obvious to anyone with ordinary skill in the art at the time the invention was made to

modify the invention of Fischer in view of Hack with a laser diode to get a more powerful and efficient light emitting source.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to claim 18 above, and further in view of Gonser (4,385,344). Fischer in view of Hack discloses the claimed invention with the exception of the light-emitting device comprising a fiber optic light guide configured to capture and transmit the light of the light source. Gonser teaches a light-emitting dental curing device with employs fiber optic light guide (Column 2, lines 25-35). Therefore, it would have been obvious to anyone with ordinary skill in the art at the time the invention was made to modify the invention of Fischer in view of Hack with a fiber optic light guide to obtain more efficient transmission of the light from the source to the exit face.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maissami in view of Hack. Maissami discloses the claimed method of curing a light curable composition with the exception of a rounded edge, instead of a spherical ball, at the terminal end of the claimed curing device is used to hold a matrix band against the tooth (Column 3, paragraph 3). Hack teaches a ball at the end of a light-emitting device for concentration of the emitted light (Fig. 6, #45). Therefore it would have been obvious to anyone with ordinary skill in the art at the time the invention was made to modify the invention of Maissami with a ball shaped terminal face of a light guide as taught by Hack in order to obtain a light emitting source with an emission face that can be efficiently used to hold matrix bands against adjacent teeth and cure and pack resins in the spaces of dental restoration procedures.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892 for art of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Kilkenny whose telephone number is (571) 272-8684. The examiner can normally be reached on Mon-Fri, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick J. Kilkenny
Art Unit 3732
August 19, 2005

8/19/05

PJK



Cary E. O'Connor
Primary Examiner